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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/935.735 | 08/24/2001 | Yu Wang | 839-1005 | 9889 |

7590 07/25/2003

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| EXAMINER |
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SCHEUERMANN, DAVID W

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| ART UNIT | PAPER NUMBER |
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2834

DATE MAILED: 07/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,735

Applicant(s)

WANG, YU

Examiner

David W. Scheuermann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 23-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10, 23-25 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 26-28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 23 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulke, US 3983427. Ulke in figure 1 shows a coil 22 supported on opposite ends by a threaded bolt passing through and securing several core sections. The threaded end of the bolt is screwed into central core section 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulke, US 3983427 in view of Wang et al., US 6570292. Ulke discloses the invention substantially as claimed. Ulke does not expressly disclose the vacuum over the coil winding or the composition of the core sections. Wang et al. disclose encasing the rotor

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in a metallic cylindrical shield 90 that forms a vacuum vessel around the core, for the purpose of protecting the super conducting coil windings from eddy currents and other electrical currents as noted in column 10, lines 32-43. Wang et al. also disclose use of an iron core rotor for the purpose of providing a high magnetic permeability core note column 4, lines 60-65. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to both encase the core and windings of Ulke in a vacuum vessel and use a iron based core. One of ordinary skill in the art would have been motivated to do this to protect the core from stray eddy currents and to provide a core of high magnetic permeability.

As to claims 10 and 23, it would have been obvious to replace an iron core with an iron-forged core for any of making the core stronger and reducing manufacturing costs.

Claims 2, 3, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulke in view of El-Antably et al., US 5296773. Ulke discloses the invention as claimed as applied to claim 1. Ulke does not expressly disclose a plurality of core sections axially aligned having a core section and opposite end sections. Wang et al. disclose a rotor assembly having end caps, for the purpose of assuring radial integrity, note column 4 lines 16-22. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add end caps on the rotor of Ulke. One of ordinary skill in the art would have been motivated to do this to assure radial integrity. Note that the end caps are axially aligned.

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Allowable Subject Matter

Claims 4-6, and 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Laskaris shows a winding support extending across the diameter of a rotor. Dawson et al. show a similar core structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (703) 308-9637. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dws
July 23, 2003



Nicholas Ponomarenko
Primary Examiner
Technology Center 2800